Virginia version of *Common Water*
Project Wet Activity, page 232

1. 350 years ago (before 1625): Indians, explorers, settlers, and wildlife

Discussion: Before Jamestown there were many tribes of Indians living in Virginia and there are records of explorers and temporary settlements in Virginia as early as the 1400's. Large Native American communities of as many as 100 roundhouses and long houses were located on well-drained soils along the James, York, Potomac and Rappahannock Rivers. Many types of wildlife such as shellfish, bison and elk were plentiful. The Powhatan Indians regularly harvested eight and nine foot sturgeon from the James River. During the early years of Jamestown, there were few settlers and the colonial population was less than 13,000. Water use was primarily for domestic purposes.

Native Americans: 2 sponges
Colonists: 1 sponge
Wildlife: 1 sponge

2. 250- 300 years ago (1650-1750):

Discussion: Colonists fanned out along the Coastal Plain searching for gold, furs, and ginseng roots. They found tobacco and corn cultivated by Indians. When demand for Virginia tobacco grew in Europe, enslaved Africans were brought to work the plantation fields. Colonists claim Indian land and by 1650 war and disease reduced the Indian population from 24,000 to 2,400. By 1750 the colonial population rose to 380,000 and 30% were of African descent. Most people lived in towns or on plantations. Plantations replace fur trading posts as the most important settlements. Plantations usually grew tobacco as a cash crop and all the food and supplies they needed. These plantations needed lots of people and all lived there so they required lots of water. Settlers moved upstream to the Piedmont. They dammed fast rivers, erected mills to grind grain, sawed wood, ran bellows, and crushed iron. Towns began to grow up around county courts, community churches, river fords, and important crossroads. Settlers used water for agriculture, travel and industry.

Settlers: colonists from Jamestown, Williamsburg: 2 sponges
Small farms and plantations: 1 sponge
Indians: 1 sponge (decrease the number from last round)
Factories/mills: 1 sponge
Wildlife: 1 sponge

3. 250 – 200 years ago (1775 - 1800):

Discussion: By 1770, the Colonial population had nearly doubled to 700,000 and climbed to 1 million in 1800. Half of the Coastal Plain forests had been cut. Plantations were at their heyday and the numbers were increasing. Regardless of their size or architecture, plantations were situated on rich, black soils along navigable stretches of waterways coursing through the Coastal Plain. They were raising cotton, flax, cattle and pigs to use themselves, as well as tobacco to sell. The towns were larger and there were more small farms. Advances in technology, agricultural production and transportation stimulated the growth of more small towns and farms. Ferries, bridges, roads and canals opened the Piedmont for settlement. Richmond, Fredericksburg, Warrenton, Charlottesville and Leesburg, located near valuable timber, water and mineral resources, and situated along rivers grew into sizeable communities. The Indians had either moved out of the area or were living on reservations in remote wetlands. Because there were more people and farms, there was less habitat for wildlife. Hunting pressure caused the extinction of woodland American bison and the passenger pigeon, and diminished deer, black bear, wild turkey, and beaver populations.

(Continued on next page)

(# 3 cont.) Townspeople: 4 sponges
Farms and plantations: 2 sponges
Factories: 2 sponges (Cont, on back/next page)
Wildlife: tear a sponge in half (VERY EFFECTIVE!) (If you don't want to tear the sponge in half, move the wildlife's catch basin to a further distance to simulate the animals having further to travel for water.)
Livestock animals: 1 sponge

4. 150 years ago: (between 1820 – 1880)

Discussion: Industrialization, urban growth, improvements in agriculture and transportation transformed the region. Complexes of stores and municipal buildings rose in city centers. Distinct residential and industrial districts emerged. Brick, stone, iron, and steel replaced wood as the favored building materials in cities. Great shipping terminals were built in Richmond and Hampton Roads to serve the steam railroads linking cities and countryside. Production rose higher in factories such as the arsenal complex in Harper's Ferry along the Potomac, the Tredegar Iron Works and the Haxall Flour Mill in Richmond.

Townspeople: 6 sponges
Farms and plantations: 4 sponges
Industry—flour mills, iron mills: 4 sponges
Wildlife: none
Livestock animals: 1 sponge

5. 50 years ago (around 1945)

Discussion: After WWII, the soldiers returned, married, built houses and started families. The towns and cities grew even larger and water usage increased dramatically. More services which required water, such as restaurants and shopping centers, were provided. Factories and community services employed most of the people. There were still farms, but plantations were a thing of the past.

All 25 sponges:
Agriculture & big corporate Pig Farms: 6 sponges
Townspeople: 8 sponges
Wildlife: 1 sponge (reintroduced species and better game management)
Factories & Businesses: 5
Hospital: 1 sponge each
Schools: 2 sponges
Power company: 2 sponges

6. Present day: Ask students to predict the water usage . Identify big users such as car washes, laundromats, water theme parks, recreational usage.
Debrief: are there any groups of users not represented? Recreation, power plants
Are the sponges appropriate sizes or quantity? How do water users affect water supply and water quality?

Note on organizing the "rounds:"
Some teachers have commented that this activity is too "rowdy" when all participants are allowed to get water at the same time in each round. The activity tends to become a competition for water withdrawal, rather than a simulation that demonstrates how water consumption has increased and changed over time. You can control the mayhem by asking each water user types (e.g. all the farms or townspeople) to come up in turn. Also, instead of 30-second rounds, another alternative is to have each participant take 7 sponges-full (one "drink" for each day of the week). This symbolizes the amount of water used over a week. The number of sponges for each round is arbitrary—the numbers are not proportional to real population growth but designed for a classroom of 25 students. You can draw pictures on the sponges with permanent markers so it's easy to remember what's what. You can record and graph the data on each round. You can also use the sponges to build a bar graph: Yellow=People (town residents, Indians), Animals =Orange(wild and domestic), Agriculture =green(farms/plantation) and Business/Industry =purple(factories, services)